Response to TCB questions

Email dated 2/9/2001

Hi Alice,

We have conducted our review of the application and the following issues need to be resolved before can proceed:

1. The bandwidth plot on page 9 of the test report is illegible. Please provide a higher resolution plot.

Answer: New test report supplied

2. The ETS test on page 10 of the test report does not appear to measure the correct parameter. We need to know the total transmit power of the actual spread spectrum signal. Measurement of a sinusoid at the same frequency will not give us this result. Please provide measurement data for the actual spread spectrum output. Per 15.31(m) provide these measurements for three channels (high, middle, low).

Answer: New test report supplied

3. Page 13 of the test report does not document compliance with the requirements on conducted spurious emissions. Please provide data which documents that the conducted spurious emissions are at least 20 dB below the carrier over the range of 30MHz to 24.5GHz. You will need to expand the measurement range and provide data at on the fundamental signal level observed.

Answer: New test report supplied

4. The peak power density on page 16 is performed using an ETSI test method which does not appear to comply with the FCC requirements and does not appear to demonstrate compliance with the FCC requirements. Please provide data responsive to the FCC requirement that power be less than 8dBm in any 3kHz band (15.247(d)) using the FCC test methods attached.

Answer: New test report supplied

5. Please confirm that the LISN used for line conducted measurements was a 50 Ohm/50uH unit.

Answer: New test report supplied

6. The readings shown on page 23 of the test report fail the FCC limits of 15.209. The corrected limit at 10 meters at 442MHz and 344 MHz is 35.5dBuV/m. The data shows 35.8dBuV/m which fails by 0.2dB. As notes to the table indicate that these emissions were believed to be sourced by the laptop, we suggest that you retest your unit in a compliant laptop and submit data which documents compliance.

Answer: New test report supplied

7. Please provide data responsive to the voltage stability requirements of 15.31(e)

Answer: New test report supplied

8. Please provide a discussion of how the US user is prevented from accessing the three higher frequency EU channels.

No answer

9. Radiated emissions were only provided for the range 30-1000MHz. Please provide radiated emissions measurements for the required range of 30MHz-24.8MHz in accordance with 15.33(a).

Answer: New test report supplied.

10. We need a detailed description of the DSS process. What is the chip rate? Symbol rate? Spreading rate? The report seems to be confused as to if this is a DSS or a frequency hopping system or a hybrid. What is this unit?

Answer: New test report supplied

11. What is the antenna gain? Since it is a PC trace an estimate will be acceptable.

Answer: New test report supplied

12. We need data documenting compliance with the processing gain requirements. Provide both theoretical and measurement based analysis. See attached jamming margin test procedure.

Answer: New test report supplied

13. Please provide an exhibit discussing the units MPE compliance and establishing the minimum separation distance for RF exposure compliance.

Answer: New test report supplied

14. You may wish to review our TCB checklist on spread spectrum

transmitters to ensure that you have addressed all issues. A copy is attached.

15. Please supply details of the label material.

Answer: The label material is polyester.

Best regards

Barry C. Quinlan
Certification & Telecom Manager
Curtis-Straus LLC

Email dated 2/22/2001

Hi Alice,

We have reviewed the new data you provided and the following issues were found:

1. You have claimed a power output of 0.1 Watts on the form 731, 0.5 watts on page 2 of the test report, and have provided data which shows a 0.01 watt power output. Please explain this factor of ten (or fifty) deviation between claimed power output and measured power output.

Answer: a revised 731 and report are reflect the output power. 0.02W (max.)

2. Please confirm that the LISN was a 50 Ohm/ 50uH device. From the new data we see a claim that it is 50 Ohms. Please tell us the nominal value of the inductive element.

Answer: LISN schematics is included in the revised test report.

3. Please provide data responsive to the voltage variation requirement of 15.31(e).

Answer: EUT has retest for voltage variation early this morning data are included in the test report.

4. Please provide a discussion of how the US user is prevented from accessing the three higher frequency EU channels.

Answer: There is a piece of data stored in the card (flash memory) called zone information to indicate where this card will be sold.
The program in this card will look at the zone information for the available channel for end user. For the 802CI sold in U.S. & Canada, the zone information will be north America, which only allow user to use from channel 1 to 11.

5. Please tell us why processing gain data for the Intersil HWB3163 Rev B WLAN PCMCIA card has been provided. Is this device identical to the Actiontec LNQ-802CI? If so, please make a statement to that effect.

Answer: 802CI and Intersil HWB3163 Rev B WLAN PCMCIA card is very similar.
Both card use the same chipset (Intersil Prism 2 chipset) & firmware.
The 802CI board layout is referred from HWB3163 Rev B WLAN PCMCIA card with very minor modification, such as changing the flash chip footprint so that alternative flash chip source can be used. Processing gain will be the same.

6. Please provide an exhibit discussing the devices MPE RF exposure compliance and establishing the minimum separation distance for this device. A statement will need to be inserted in the user manual regarding RF exposure. We will advise you on the wording when the RF power output issue is resolved and you supply the MPE data.

Answer: 802CI is a PCMCIA Wireless LAN card, it is mostly used in PC system either desktop and/or notebook system. User would have at least 10cm of distance from this device.

Best regards

Barry C. Quinlan
Certification & Telecom Manager
Curtis-Straus LLC

Email dated 2/23/2001

Hi Alice,

The answer to point 4 is acceptable. However for point 5 we will need to see a detailed comparison between the Intersil and Actiontec PCMCIA cards. We have consulted the FCC database and they have stated the use of Intersil (Harris) generic test data is not acceptable. For point 6 we do need to see the MPE calculation. I suggest you discuss this with the test lab.

The link to the FCC database statement is
http://hraunfoss.fcc.gov:8888/eas_public/SilverStream/Pages/pg_html_fts_res.html?letter=405

Answer: Regarding to Schematic and Trace layer, the Intersil and Actiontec's design are identical. We use Intersil as our reference.

Best regards

Barry C. Quinlan
Certification & Telecom Manager
Curtis-Straus LLC

Email dated 2/23/2001

Alice,

The answers to our points 2 and 3 are satisfactory. However for point 1 you have now claimed a power output of 0.02 watts but the measured power was less than 0.01 watts. Please explain this discrepancy. Why did the unit measured have an output power half the rated output?

Points 5 and 6 remain unresolved.

Answers: New RF power output data supplied, processing gain report supplied and MPE prediction supplied

Best regards

Barry C. Quinlan
Certification & Telecom Manager
Curtis-Straus LLC